

KDY 9465
PATENT

**PNEUMATICALLY-POWERED MINE DOOR INSTALLATION
WITH HYDRAULIC CHECKING SYSTEM**

ABSTRACT

A mine door installation has a frame installed in a mine passageway. At least one door leaf is mounted on the frame for swinging movement between open and closed positions. Movement of the door leaf is powered by a pneumatic actuator. The door installation also has a hydraulic checking system for controlling the speed of the door leaf as it moves back and forth between open and closed positions. A pneumatically-powered control system may be provided to control the door installation. The pneumatic control system may comprise a calibrated vent to shorten the delay in the response of the door leaf to direction from the control system to stop moving. The pneumatic control system may also comprise a limit valve to prevent the door installation from opening when a second door installation is open, thereby preventing both door installations in an air lock from being open at the same time.